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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--|------------------------------------|
| 10/809,995 | 03/26/2004 | Mi-Sook Nam | 10125/4138 | 8489 |
| <div>7590 05/18/2007 Brinks Hofer Gilson & Lione Post Office Box 10395 Chicago, IL 60610</div> | | | <div>EXAMINER TON, MINH TOAN T</div> | |
| | | | <div>ART UNIT 2871</div> | <div>PAPER NUMBER</div> |
| | | | <div>MAIL DATE 05/18/2007</div> | <div>DELIVERY MODE PAPER</div> |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/809,995 | Applicant(s) NAM ET AL. | |
| | Examiner Toan Ton | Art Unit 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/01/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-26,28-30,36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-26,28-30,36 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-26, 28-30, 36 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Murai et al (US 2005/0213005) in view of Matsushita et al (US 6885418).

Murai discloses a fabricating method of an array substrate for a transfective liquid crystal display device comprising (see at least Figures 4-17): forming a gate line and a data line on a substrate, the gate line and the data line crossing each other to define a pixel region having reflective and transmissive portions; forming a thin film transistor connected to the gate line and the data line; forming a first passivation layer on the thin film transistor, the first passivation layer having at least one protrusion in the reflective portion, wherein the least one protrusion is formed by patterning the first passivation layer; forming an uneven reflective layer (e.g., 8a) on the first passivation layer in the reflective portion that has unevenness at least in part due to the at least one protrusion; and forming a pixel electrode (e.g., 9a) on the first passivation layer; providing a second substrate having a color filter layer (e.g., 24), each color of the color filter layer having regions corresponding in dimension and arrangement to the reflective and transmissive portions of a pixel region, the second substrate further comprising an overcoat layer (e.g. 25) on the color filter layer, a surface of the overcoat layer having a recess portion in the transmissive region; a common electrode (21) on the surface of the overcoat layer; and disposing

the first substrate such that reflective and transmissive portions of the first substrate oppose the corresponding regions of the second substrate.

The limitation not disclosed by Murai is the color filter layer having at least one through hole in the reflective portion. Matsushita discloses a transflective type LCD device comprising the color filter including openings in the reflection region for achieving advantages such as dispersing bright regions across each pixel that results in improving the visibility (see at least col. 3, lines 50-55). Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ the color filter for achieving advantages such as dispersing bright regions across each pixel that results in improving the visibility.

Murai discloses the method comprising the reflective layer including one of aluminum and aluminum alloy (see at least col. 3, [068]).

Murai discloses the first passivation layer (e.g., 7a) comprising resin.

Murai discloses thickness' characteristics in the liquid crystal layer in the transmissive and in reflective portions (see at least Figures 4-17).

Murai discloses no protrusions formed in the transmissive portion (see at least Figure 11D).

The use of a passivation layer between the pixel electrode and the reflective layer is common and known in the art, wherein materials such as inorganic insulator (e.g., SiO) and organic insulator (e.g., BCB, resin) for achieving advantages such as minimizing oxidation to the reflective layer. Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a passivation layer (e.g., organic, inorganic

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insulator) between the pixel electrode and the reflective layer for achieving advantages such as minimizing oxidation to the reflective layer. Further, the contact hole through insulating layers is required so that the pixel electrode makes contact with the thin film transistor.

Response to Arguments

2. Applicant's arguments filed 03/01/07 have been fully considered but they are not persuasive.

Applicant contended that the protrusion is formed due to the unevenness of layer 13a. However, the present claimed invention does not preclude forming the protrusion employing an additional layer (e.g., 13a). Murai discloses the LCD device comprising the first passivation layer having at least one protrusion in the reflective portion, wherein the least one protrusion is formed by patterning the first passivation layer (see at least Figure 5). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 9, 2007


TOAN TON
PRIMARY PATENT EXAMINER